

**IN THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please amend claims 1, 9, 10, 24, 25, 29, and 31.

Please cancel claims 2-6, 11, and 26-28.

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**STATUS OF CLAIMS**

Claim 1 (**currently amended**) An isolated nucleic acid molecule comprising a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence with at least 99% homology homologous to SEQ ID NO: 25 ~~sequences selected from the group consisting of: SEQ ID NO:24 to SEQ ID NO: 27, and SEQ ID NO:46, and fragments thereof; said nucleic acid molecule encoding at least a portion of nGPCR-x.~~

Claims 2-6 (**canceled**)

Claim 7 (**original**) The isolated nucleic acid molecule of claim 1 wherein said nucleic acid molecule is DNA.

Claim 8 (**original**) The isolated nucleic acid molecule of claim 1 wherein said nucleic acid molecule is RNA.

Claim 9 (**currently amended**) An expression vector comprising a nucleic acid molecule of claim 1 ~~any one of claims 1 to 5.~~

Claim 10 (**currently amended**) The expression vector of claim 9 wherein said nucleic acid molecule comprises SEQ ID NO:12 ~~a sequence selected from the group consisting of SEQ ID NO:11 to SEQ ID NO:13, and SEQ ID NO:45.~~

Claim 11 (canceled)

Claim 12 (original) The expression vector of claim 9 wherein said vector is a plasmid.

Claim 13 (original) The expression vector of claim 9 wherein said vector is a viral particle.

Claim 14 (original) The expression vector of claim 13 wherein said vector is selected from the group consisting of adenoviruses, baculoviruses, parvoviruses, herpesviruses, poxviruses, adenoassociated viruses, Semlike Forest viruses, vaccinia viruses, and retroviruses.

Claim 15 (original) The expression vector of claim 9 wherein said nucleic acid molecule is operably connected to a promoter selected from the group consisting of simian virus 40, mouse mammary tumor virus, long terminal repeat of human immunodeficiency virus, maloney virus, cytomegalovirus immediate early promoter, Epstein Barr virus, rous sarcoma virus, human actin, human myosin, human hemoglobin, human muscle creatine, and human metalothionein.

Claim 16 (original) A host cell transformed with an expression vector of claim 9.

Claim 17 (original) The transformed host cell of claim 16 wherein said cell is a bacterial cell.

Claim 18 (original) The transformed host cell of claim 17 wherein said bacterial cell is E. coli.

Claim 19 (original) The transformed host cell of claim 16 wherein said cell is yeast.

Claim 20 (**original**) The transformed host cell of claim 19 wherein said yeast is *S. cerevisiae*.

Claim 21 (**original**) The transformed host cell of claim 16 wherein said cell is an insect cell.

Claim 22 (**original**) The transformed host cell of claim 21 wherein said insect cell is *S. frugiperda*.

Claim 23 (**original**) The transformed host cell of claim 16 wherein said cell is a mammalian cell.

Claim 24 (**currently amended**) The transformed host cell of claim 23 wherein said mammalian cell is selected from the group consisting of chinese hamster ovary cells, HeLa cells, African green monkey kidney cells, human 293 cells, and murine 3T3 fibroblasts.

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Claims 25 (**currently amended**) An isolated nucleic acid molecule comprising SEQ ID NO:12 ~~a nucleotide sequence complementary to at least a portion of a sequence selected from the group of sequences consisting of SEQ ID NO:11 to SEQ ID NO:13, and SEQ ID NO:45, said portion comprising at least 10 nucleotides.~~

Claims 26-28 (**canceled**)

Claim 29 (**currently amended**) A composition comprising a nucleic acid molecule of any one of claims 1 ~~to 5~~ or 25 and an acceptable carrier or diluent.

Claim 30 (**original**) A composition comprising a recombinant expression vector of claim 9 and an acceptable carrier or diluent.

Claim 31 (**currently amended**) A method of producing a polypeptide that comprises SEQ ID NO:25 ~~a sequence selected from the group consisting of sequences consisting SEQ ID NO:24 to SEQ ID NO:27, and SEQ ID NO:46, and homologs and fragments thereof~~, said method comprising the steps of:

- a) introducing a recombinant expression vector of claim 10 into a compatible host cell;
- b) growing said host cell under conditions for expression of said polypeptide; and
- c) recovering said polypeptide.

Q Claim 32 (**original**) The method of claim 31 wherein said host cell is lysed and said polypeptide is recovered from the lysate of said host cell.

Claim 33 (**original**) The method of claim 31 wherein said polypeptide is recovered by purifying the culture medium without lysing said host cell.

Claims 34-89 (**withdrawn**)

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